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ABSTRACT

This study explored seven possible techniques for improving the rate of returns for a questionnaire study with special concern for collecting information through high school follow-up studies. It evaluated these techniques using two criteria: their effectiveness in improving returns and their cost-effectiveness. The results suggest that a school district planning to conduct such a study should orient those who will be involved prior to their leaving school. It further suggests that prior to receiving the instrument those involved in the study should be contacted by telephone, to elicit their cooperation, particularly when the geographic area is small and local calls can be made. The writer concludes that there is a need to study more complex methods for improving the rate of returns of follow-up studies, with a strong probability that telephoning ahead, and using a follow-up that includes a second copy of the instrument and a second cover letter, would produce both greater cost effectiveness and a higher rate of return.
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ALTERNATIVE METHODS OF IMPROVING THE RETURN OF FOLLOW-UP QUESTIONNAIRES: THEIR COST AND EFFECTIVENESS

School guidance counselors share with others in the educational community a reliance upon questionnaires for the collection of information. They also share the problem of a poor rate of return: response rates as low as 10 to 30 percent are not uncommon.[1] In an attempt to improve these return levels, many Educators have been forced to create complex research procedures.[2] Today there exists a body of research suggesting ways to improve the rate of returns of questionnaires.[3] Yet, even with this body of writing, the process of using questionnaires seems to be as much one of art as of science, with little definitive data existing to guide those who seek productive procedures.

This article reports the results of a study of seven techniques expected to maximize the returns of a survey of high school graduates and drop-outs. It evaluates these techniques using two criteria: their effectiveness in improving returns and their cost-effectiveness. Guidance counselors who would conduct follow-up studies involving high school and post-high school age subjects may find the results helpful as they design their data gathering process.

Purpose of the Study

The study grew from the desire of a large mid-western school district to conduct a follow-up of those who had graduated or dropped out of their high schools. Since the follow-up was to be used to develop a computerized

data bank, and would rely on sampling techniques, there was a perceived need to ensure a very high (90 to 95 percent) rate of return. Based on this need, a pilot was conducted of a number of possible approaches to the collection of data using questionnaires. Also, since school districts cannot lightly ignore cost, an effort was made to identify the cost-effectiveness of each technique.

Design of the Study

In using a questionnaire in a follow-up study, the usual procedure is to send an instrument and a cover letter to each participant explaining the purposes of the study. A number of additional steps could be added, with the logical expectation that the rate of return might improve. For example, a counselor could "telephone ahead" to ensure that the person understood the purpose of the follow-up and would agree to participate. Various forms of follow-ups could be used, including the use of the telephone, postcards, and second copies of instruments and letters, if the person failed to return an instrument. There could even be an offer to pay those who responded.

Based on these possibilities, and recognizing that there are others, seven different techniques for gathering questionnaire information were identified. In the spring of 1973, seventy participants from each of the four high schools in the district were chosen at random from a list of Seniors of the previous year. Ten from each school were assigned to a group, making a total of forty in each of the seven groups. Each group was assigned one of the collection techniques described below:

Group One: provided the BASE against which all other groups and techniques were compared. This group received a letter and instrument with no follow-up or contact prior to receiving the instrument and letter.

Group Two: members of this group were offered $3.00 for completion of the instrument; no follow-up was provided for those who did not respond.

Group Three: members of this group were offered $2.00 for comple - tion of the instrument; again no follow-up was provided.

Group Four: this group was contacted by telephone and asked to participate in the study prior to receiving an instrument. No follow-up was provided for those who did not respond.

Group Five: received a telephone call follow-up if they did not return an instrument one week after receiving it.

Group Six: received a post card follow-up if they did not return an instrument one week after receiving it.

Group Seven: received a second copy of the instrument and a second cover letter if they did not return an instrument one week after receiving it.

Responses were accepted from the 280 subjects for a period of three weeks to simulate the realities of the graduate follow-up process that would be used later by the district.[4]

The instrument used in the pilot included questions to elicit data concerning activities in school, since leaving school, and plans for the future.

Limitations of the Study

The study compared only a few of the possible methods for improving the rate of return for questionnaire studies. For example, no effort was made to explore all of the follow-up procedures possible when the person failed to return an instrument. It also did not explore complex combinations; such as contacting the participants via telephone prior to sending out the instrument, and then sending a follow-up letter or letters to those who did

not respond.

A second limitation concerns the use of cost estimates in the study. Since the school district conducting the study was able to use sophisticated systems for typing and in-house printing services, the cost figures generated would be difficult to transfer to other settings that must rely on more traditional and more expensive duplication systems.

Results of the Study

The results of the study to improve rate of returns are summarized in Table 1.

Insert Table 1 here

Paying for the return of the instrument was, as expected, the most successful of the techniques piloted. When $3.00 was offered for a completed questionnaire, the response rate, after three weeks, was 73 percent (78 percent after four weeks, or approximately 30 to 40 percent higher than a procedure that sent questionnaires and used no follow-up for those who did not respond). However, even financial reward by itself seemed to be an inadequate factor in motivating all people to return a questionnaire.

None of the techniques generated a return rate at the level originally sought by the school district. It was concluded that it would be very difficult to provide an extremely high rate of return for a high school follow-up study without contacting students while they are still in school to explain the project and elicit their cooperation. This approach would ensure that students understood the study and may encourage them to respond when contacted after graduation. Since this was the original intent of the district, the plan seems justified.

Results suggest that the use of the telephone with follow-up studies should be encouraged. The BASE technique return (Group One) was improved significantly (by 30 percent) by telephoning and explaining the project. Telephoning those who did not return an instrument (Group Five) provided an improvement of approximately 20 percent over the BASE group.

Some type of follow-up of those who did not respond is vital. Each of the follow-up techniques piloted improved the rate of return, with the use of a post card the least effective, and the use of a second letter and instrument or a telephone call each improving the return rate by approximately 20 percent.

Cost Considerations

Each technique requires certain BASE COSTS. These include the cost for typing, duplicating the instrument and cover letters, and postage. These BASE COSTS were identified as $152.25 or approximately $21.75 for each of the seven groups/techniques used in the study.

In addition, each alternative method for collecting data requires certain SPECIAL COSTS, as follows:

Group Two: $3.00 paid to each respondent.

Group Three: $2.00 paid to each respondent.

Group Four: telephoning 40-plus people prior to sending out the instruments.

Group Five: telephoning those who did not respond after one week.

Group Six: Printing and mailing a post card to those who did not respond after one week.

Group Seven: printing and mailing a second letter and instrument to those who did not repond after one week.

Together, BASE, and SPECIAL COSTS provide a basis for identifying the

TOTAL COSTS of each technique. These COSTS are shown in Table 2.

Insert Table 2 here

Yet cost in itself is probably not the final consideration in the selection of the proper technique for collecting information. What we seek is not the cheapest change we can make in the BASE technique, but the one that produces the greatest improvement in return per cost increase. To put it another way, we must identify the cost/effectiveness of the various techniques and select the one that meets the specific needs of the counselor conducting the study.

To compute a cost/effectiveness ratio for each of the techniques the TOTAL COST of the technique was divided by the number of returns it generated. The result is expressed as a "cost-per-return" ratio and is plotted in Figure 1.

Insert Figure 1 here

We can now begin to identify two possible approaches to the selection of a technique to gather information. First, assume that the goal is to conduct a study that must produce a high rate-of-return with cost for the collection of data a secondary consideration. The results of this study suggest that high rates of return will be produced from those techniques clustering to the "right" on Figure 1 (techniques 2, 3, and 4).

Assume that in a second school district, the goal is to keep cost for data collection down while seeking the highest possible rate of returns. The least expensive information collecting techniques may be selected from those clustering near the "bottom" of Figure 1 (1 and 5).

Techniques offering the best cost/effectiveness ratio (or, those producing the most returns for each dollar spent) will cluster near the "lower right hand corner" of Figure 1 (techniques 5, 7, and 4).

In summary, this study explored a few of the possible techniques for improving the rate of returns for a questionnaire study with special concern for collecting information through high school follow-up studies. The results suggest that a school district planning to conduct such a study should orientate those who will be involved prior to their leaving school. It further suggests that prior to receiving the instrument those involved in the study should be contacted by telephone, to elicit their cooperation, particularly when the geographic area is small and local calls can be made. The writer concludes that there is a need to study more complex methods for improving the rate of returns of follow-up studies, with a strong probability that telephoning ahead, and using a follow-up that includes a second copy of the instrument and a second cover letter, would produce both a cost/effective and a high rate of return.

Footnotes

[1]H.W. Boyd, Jr. and R. Westfall. Marketing Research. (Homewood, Ill.: Richard D. Irwin, 1972); and D.J. Luck, H.G. Wales, and D.A. Taylor. Marketing Research. (Englewood Cliffs, N.J.: Prentice-Hall, 1974).

[2]For example, one doctorial candidate utilized a follow-up procedure that included a post card, followed by a second copy of the instrument and a cover letter, and finally a personal telephone call to those who had still not responded, see R.H. Hoenes, "School Community Relations: the Effectiveness of Four Techniques of Disseminating Information About a School's Industrial Arts Program to Its Community." Unpublished Dissertation, Ohio State University, 1970, 113-114.

[3]The variety in variables possibly affecting the rate of return may be seen in the sampling of studies shown below: length of the questionnaire, M.L. Brown, "Use of a Post Card Query in Mail Surveys," Public Opinion Quarterly, 1965, 29: 635-637; providing return postage, D.J. Champion, and A.M. Sear, "Questionnaire Response Rate: A Methodological Analysis," Social Forces, 1969, 47:335-339; guaranties of anonymity, W.S. Mason, R.J. Dressel, and R.K. Bain, "An Experimental Study of Factors Affecting Response to a Mail Survey of Beginning Teachers," Public Opinion Quarterly, 1961, 25:296-299; characteristics of the cover letter, M.B. Kawash and L.M. Aleamoni,

"Effect of Personal Signature on the Initial Rate of Return of a Mailed Questionnaire," Journal of Applied Psychology, 1971, 55: 589-592, and R. Simon, "Responses to Personal and Form Letters in Mail Surveys," Journal of Advertising Research, 1967, 7:28-30; using various formats for returning the instrument, J.F. Veiga, "Getting the Mail Questionnaire Returned: Some Practical Research Considerations," Journal of Applied Psychology, 1974, 59: 217-218; and the color of the instrument itself, M.T. Matteson, "Type of Transmittal Letter and Questionnaire Color as Two Variables Influencing Response Rates in a Mail Survey," Journal of Applied Psychology, 1974, 59:535-536.

[4]Responses received during the 4th week were not used in this report: they did not significantly change the percentage of returns and did not affect the ranking of the various groups; 4th week responses will occasionally be presented in this article when required for the sake of clarity.

Table 1

The Return Rate of Alternative Techniques

Technique	Description	% of Returns After Three Weeks
1	BASE Group; no treatment	38%
6	Post card follow-up	50%
7	2nd letter and instrument follow-up	58%
5	Telephone follow-up	58%
3	Paying $2.00 for returning instrument	65%
4	Telephoning ahead	68%
2	Paying $3.00 for returning instrument	73%

N sent to each group = 40

Table 2

Costs Associated with Each Technique

Technique	Description	Costs			
		BASE	SPECIAL	TOTAL	Per Return
1	BASE Group; no treatment	$21.75	$ 0.00	$21.75	$1.55
5	Follow-up by telephone	"	6.00	27.75	1.40
6	Follow-up by post card	"	8.85	30.60	1.73
7	Follow-up by 2nd letter/inst.	"	12.85	34.68	1.70
4	Telephoning ahead	"	30.00	51.75	1.89
3	Pay $2 for completing instrument	"	42.00	63.75	3.04
2	Pay $3 for completing instrument	"	84.00	105.75	3.80

Figure 1

Comparison of Techniques

by Cost/Effectiveness Ratio